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Hydrogeology and Environmental Engineering
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May 3, 2005
Project # 22029.Q

Ms. Judy Cox
21389 Boyle Road
Palo Cedro, CA 96703

Subject: Semi-Annual Groundwater Monitoring Report - Spring 2005
C & N Tractors - 496 Salinas Road, Watsonville, California

Dear Ms. Cox,

This report presents a summary of groundwater monitoring activities conducted in the second quarter 2005 for the property located at 496 Salinas Road, Watsonville, California (Location Map, Figure 1). Semi-annual groundwater monitoring has been required by the California Regional Water Quality Control Board (Regional Board) pursuant to a historic release of petroleum hydrocarbons to groundwater at the site. This report includes descriptions of field methodologies, a tabular summary of groundwater elevations and dissolved petroleum hydrocarbon (PHC) concentrations, and figures showing the current PHC concentrations and groundwater elevations.

EXECUTIVE SUMMARY

The primary purpose of this report is to document the results of sampling a groundwater monitoring network installed around an old petroleum hydrocarbon (PHC) release, which originated from a small underground storage tank (UST) removed from the site in 1987. Semi-annual groundwater monitoring is being conducted in accordance with the Regional Board's letter dated March 18, 2005. Field operations included groundwater testing of the sites' four-well network. The results indicate a relatively small plume fingerprinted as "aged" gasoline has impacted shallow groundwater at the site in the immediate vicinity of the former UST location. Due to the age and limited amount of the release, BTEX and TPH compounds are almost gone.

Laboratory analysis of ground water yielded few contaminant concentrations exceeding the California Regional Water Quality Control Board's (CRWQCB) water quality goals. Specifically, the groundwater samples contained:

- TPH-gasoline was detected in well MW-1, situated immediately downgradient of the former UST, at a concentration of 300 parts per billion (ppb); well below regulated thresholds. The laboratory fingerprinted this detection as aged gasoline. The established water quality goals for gasoline is set at 1000 ppb.

- MTBE was detected for the second time in wells MW-2, and 4 at concentrations marginally exceeding the water quality goal. Specifically, water collected from MW-2, and -4 contained MTBE at a concentrations of 7.5 and 7.6 ppb, respectively, which exceeds the water quality goal of 5 ppb. These low-level detections of MTBE are believed to originate from surface spill of gasoline in the yard area (since MTBE has never been detected in well MW-1, closest to the former tank), and are not considered a significant groundwater plume.

Only trace amounts of BTEX contaminant compounds were detected in well MW-1 at concentrations below water quality goals.

The small size of the plume and lack of volatile compounds (BTEX) and the low-level TPH concentrations are common for small, old releases that have attenuated by biodegradation and/or soil vapor volatilization. We believe the plume is stable and naturally attenuating. On this basis, this case should be considered low risk.

We recommend sampling the monitoring well network once more in the Fall of 2005 to confirm that the aged gasoline plume is stable and continues to naturally attenuate. If concentrations in groundwater confirm this trend, we will request site closure with no further action for the groundwater investigation at this site, following proper destruction of all site monitoring wells.

PURPOSE AND SCOPE

This report describes groundwater monitoring activities conducted by Weber, Hayes and Associates during the second quarter 2005 at the C & N Tractors facility, 496 Salinas Road, Watsonville, CA (Figure 1). These activities are required by the California Regional Water Quality Control Board, Central Coast Region (Regional Board) pursuant to a release of petroleum hydrocarbons from an underground storage tank system at the site.

This report includes descriptions of groundwater monitoring field methodologies, a tabular summary of groundwater elevations and dissolved hydrocarbon concentrations, and figures showing the current groundwater elevations and flow direction and hydrocarbon concentrations.

Groundwater monitoring activities conducted during this quarter included:

- Measuring depth-to-groundwater and dissolved oxygen concentration in all wells.
- Collecting groundwater samples from all site monitoring wells, and submitting the samples to a State-certified laboratory for analyses.
- Properly disposing of the groundwater purged prior to sampling the monitoring wells.
- Calculating groundwater elevations and flow direction at the site, compiling water quality data, and preparing this technical report describing the subsurface conditions beneath the site.

SITE DESCRIPTION

The subject site is located at 496 Salinas Road, in the community of Pajaro, north Monterey County, in an area of mixed land use ranging from residential to food processing and agricultural development. Major features of the area include the Southern Pacific railroad yard on Salinas Road opposite the subject property, a rail line adjacent to the subject property, and the Pajaro River to the

north west. Areas to the south and west of the site are agricultural fields. Commercial properties and some residential neighborhoods are present to the north.

The site itself is a flat-lying commercial property that contains the offices, warehouses, and storage yards of C&N Tractor, a tractor sales and rental business. The parcel contains three building which include a sales office (northern warehouse), an equipment repair shop (central structure), and a fabrication building (southern warehouse). The remaining portion of the site is asphalt covered and used for parking and the display of tractor and equipment (see Site Map, Figure 2). There are no existing underground fuel storage tanks on the property.

Shallow Soil and Groundwater Conditions

This site is located on the flood plain of the Pajaro Valley, approximately 8,000 feet south and east of the main channel of the Pajaro River, the major surface drainage for the region (see topographic map, Figure 1). Geologic mapping by William Dupre of the USGS (1975) shows the site to be underlain by Quaternary-age Older Flood-Plain Deposits and described as fine-grained deposits of sand, silt and clay with a total thickness of more than 200 feet. A 50-foot thick gravel layer at the base of these deposits is a significant local aquifer, producing up to 500 gpm to agricultural wells in the Pajaro Valley (Muir, 1972).

Weber, Hayes and Associates conducted a Shallow Soil and Groundwater Assessment at the site on June 19, 2003 (*Weber, Hayes and Associates*, October 3, 2003). Drill logs from six, continuously-cored exploratory borings positioned within a 60' x 60' section of the site showed : 1) groundwater was consistently encountered at a depth of 7 feet, and 2) the shallow soils contained relatively continuous stratigraphy which included shallow fill (approximately 2-3 feet) underlain by a shallow clay unit (approx 2-feet thick), which was underlain by a saturated unit of silty-sand (approx. 4-6 feet thick), which was underlain by a clay unit (>2 feet thick). Review of groundwater elevation data from the 8-well monitoring network located across Salinas Road indicates shallow groundwater flow direction is toward the west and can fluctuate up to six feet in elevation between the winter and summer seasons (7.5-to-13.5 feet below ground surface)[1].

Weber, Hayes and Associates' March 27, 2005 well installation activities confirmed our previous investigation of subsurface conditions at the site. Shallow soils underlying the previous terminated boring depths of 12 feet bgs consisted of interbedded clay to clayey-silt units to a total depth of investigation at 20 feet bgs. Groundwater during this investigation was consistently encountered at a depth of 5 feet bgs.

Previous Environmental Investigations

There are currently no existing underground storage tanks (USTs) on the site. A 550-gallon gasoline storage tank was removed in April 1987 under a permit from Monterey County Health Department (MCHD). Sidewall soil samples obtained following UST-removal and over-excavation of approximately 100 cubic yards of fuel-impacted soils contained moderate levels of gasoline

[1]: Monitoring reports for Union Pacific Railroad Yard, 499 Salinas Road, Pajaro, dated 1996-2001.

contamination (<330 mg/kg, parts per million). The tank pit was backfilled and a single monitoring well (MW-1) was installed immediately adjacent to the former UST location.

Groundwater was initially sampled from the well in March and December 1988 and contained relatively low gasoline compounds. The 14-foot deep well was gauged to be dry in June and July 1989 and was not sampled again until March 1997, as part of a Phase I/II property assessment[2]. A sample was also obtained in December 1998 at the request of the CRWQCB (directive dated November 25, 1998). All previous groundwater test results are summarized in Table 1, along with current data.

Groundwater has generally been encountered at a depth of 7-8 feet. Lab results indicate that groundwater in this well has contained relatively low concentrations of dissolved gasoline and the constituent gas compounds (benzene, toluene, ethylbenzene and xylenes, BTEX). However, concentrations of dissolved gasoline and the constituent compound benzene slightly exceeded regulatory water quality objectives in water samples prior to 1998 (see Table 1).

Weber, Hayes and Associates observed the installation of three additional groundwater monitoring wells at the site on January 27, 2005 (*Weber, Hayes and Associates*, March 9, 2005). MW-2 was positioned to delineate the up-to-eastern side gradient extent of petroleum hydrocarbon contamination and to confirm that no upgradient plumes are contributing to the known sources of contamination. MW-3 was installed 75 feet west (down gradient to side gradient) of the former gasoline UST. This well will monitor the down gradient-lateral edge of the historic gasoline release. MW-4 was installed approximately 115 feet downgradient from the former gasoline tank. We saw-cut through the foundation floor and installed the well at an accessible location near the southern end of the existing warehouse.

The soil results from the January 27, 2005 monitoring well installation, and groundwater results following the well installation confirmed that the historic release of petroleum hydrocarbons to soil and groundwater is small, stable and naturally attenuating. This conclusion is based on the lack of volatile compounds (BTEX) and the low-level TPH concentrations detected in soil and groundwater which are common for old releases that have attenuated by biodegradation and/or soil vapor volatilization.

SUMMARY OF SEMI-ANNUAL GROUNDWATER MONITORING ACTIVITIES

Groundwater Monitoring

The second quarter 2005 groundwater monitoring event took place on April 12, 2005. Fieldwork was conducted according to our standard operating procedures for groundwater monitoring which are described in Appendix A. Field data sheets are also presented in Appendix A. Groundwater samples were collected from monitoring wells MW-1 through 4 at the site and delivered to a State-certified

[2]: Weber, Hayes and Associates report: *Phase I & II Environmental Site Assessment, 496-498 Salinas Road, Watsonville*, dated April 14, 1997.

laboratory (Entech Analytical Labs, Inc. CA ELAP# 2346) under proper chain-of-custody documentation. The groundwater samples were analyzed for TPH-g by EPA Method 8015 MOD, for BTEX and the fuel oxygenates MTBE, and TBA by EPA Method 8020. Any detections of MTBE were confirmed by EPA Method 8260.

Groundwater Elevation Data

Each monitoring well's depth to groundwater was measured and recorded on field notes (Appendix B). Based on the data acquired, the hydraulic gradient at the site is on the order of 0.004 feet per foot in an easterly direction (Figure 2). The groundwater flow direction measured during this groundwater monitoring event, and in our previous groundwater monitoring event (January 27,2005) is contrary to that of the local groundwater flow direction, believed to be in a more southwesterly direction. We note that the groundwater gradient measured at this site is very small (approximately ½ foot per 125 lateral feet), and that the gradient may be subject to reversals. The current groundwater flow direction at the site places "clean well" MW-2 down-to-side gradient of the former UST location.

We note that the top of casing elevation reported by McGregor Land Surveys in our previous report (March 9, 2005) was erroneous. McGregor Land Surveys has recently reported to us that the top of casing elevation for well MW-1 is actually 25.24 feet, NAVD 88, and not 25.47 feet, NAVD 88, a difference of 0.23 feet.

Groundwater Analytical Results

The groundwater analytical results for the first quarter 2005 are summarized in the table below and on Figure 2. Groundwater analytical data collected by Weber, Hayes and Associates at the site is summarized in Table 1. The laboratory's Certificate of Analysis is presented as Appendix B. All quality assurance / quality control surrogates recoveries, spikes, and duplicates were within acceptable limits.

Groundwater Sample Analytical Results - April 12, 2005
All results are in parts per billion (**:**g/L)

Well I.D.	***Total Petroleum Hydrocarbons***	***Volatile Organic Compounds***				
	Gasoline	Benzene	Toluene	Ethylbenzene	Xylenes	MtBE
MW-1	300*	ND	0.51	7.5	5.6	ND
MW-2	ND	ND	ND	ND	ND	7.5**
MW-3	ND	ND	ND	ND	ND	ND
MW-4	ND	ND	ND	ND	ND	7.6**
AL's/MCL's	1,000	1	150	300	1,750	5

ND: Not Detected
*: Laboratory indicated result is possibly aged gasoline. **= MtBE detections have been confirmed by EPA Method 8260

Based on the laboratory analytical results, all of the monitoring well groundwater samples obtained indicate that the groundwater plume appears to be relatively small, stable and naturally attenuating. These findings are based on the following;

- < The plume is naturally attenuating based on the lack of volatile compounds (BTEX) and the low-level TPH concentration in well MW-1 which is common for old releases that have attenuated by biodegradation and/or soil vapor volatilization.

CONCLUSIONS

Soil and groundwater results confirm that the historic release of petroleum hydrocarbons to soil and groundwater is small, stable and naturally attenuating. This conclusion is based on the lack of volatile compounds (BTEX) and the low-level TPH concentrations detected in soil and groundwater which are common for old releases that have attenuated by biodegradation and/or soil vapor volatilization. This site should be considered of low risk.

RECOMMENDATIONS

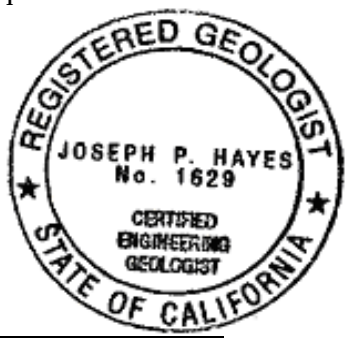
We recommend sampling the four well network for one additional semi-annual event in the fall of 2005 to confirm that the plume is stable, and naturally attenuating. If contaminant concentrations in groundwater continue to show this trend, we will request case closure following the proper destruction of all site monitoring wells.

LIMITATIONS: Our service consists of professional opinions and recommendations made in accordance with generally accepted geologic principles and practices. This warranty is in lieu of all others, either expressed or implied. The analysis and conclusions in this report are based on sampling and testing which are necessarily limited. Additional data from future work may lead to modifications of the options expressed herein.

Thank you for this opportunity to be of service. Should you have any questions or comments regarding this project, please contact us at our office.

Respectfully submitted,

WEBER, HAYES AND ASSOCIATES



By: Jered Chaney
Staff Geologist

And: Joseph Hayes
Certified Engineering Geologist #1629
Certified Hydrogeologist #373

cc:

California Regional Water Quality Control Board, Central Coast Region
Mr. John Goni, Case Officer
895 Aerovista Place, Suite 101
San Luis Obispo, California 93401-7906

Monterey County Department of Health, Division of Environmental Health
Mr. Robert Fernandez, Hazardous Materials Specialist II
1270 Natividad Road
Salinas, California 93906-3198

Attachments:

Table 1: Summary of Groundwater Elevation and Analytical Data

Figure 1: Location Map
Figure 2: Groundwater Monitoring Results

Appendix A: Standard Operating Procedure - Monitoring Well Sampling & Field Data Sheets
Appendix B: Certificates of Analysis and Chain-of-Custody Documentation - Groundwater Samples

REFERENCES

California Regional Water Quality Control Board - Central Coast Region Correspondence: UST: C & N Tractors, 496 Salinas Road, Watsonville (Pajaro), Monterey County:

Notice of Responsibility & Request for Investigation, October 4, 2002.

Response to Work Plan, May 22, 2003.

Response to Work Plan, September 27, 2004.

Response to Well Installation and Sampling Report (RWQCB Case 3675), March 18, 2005.

Weber Hayes and Associates Reports for C & N Tractors496-498 Salinas Road, Watsonville, California:

Phase I & II Environmental Site Assessment, April 14, 1997.

Workplan for Soil and Groundwater Characterization, April 11, 2003.

1. Summary Report: Shallow Soil and Groundwater Assessment Report, 2.Workplan: Installation of a Shallow Groundwater Monitoring Network, October 3, 2003.

Monitoring Well Installation, Development, and Sampling Report, March 9, 2005.

Table 1
Summary of Groundwater Elevation and Analytical Data
C & N Tractors - 496 & 498 Salinas Road, Watsonville, California
Weber, Hayes and Associates

Monitoring Point Information						Petroleum Hydrocarbon Concentration Data						Field Measurements	
Well I.D.	TOC Elevation (feet, NGVD)	Screen Interval (feet, bgs)	Date Sampled	Depth to Groundwater (feet, TOC)	Groundwater Elevation (feet, NGVD)	Total Petroleum Hydrocarbons	Volatile Organic Compounds					Dissolved	Redox
						Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE (ug/L)	Oxygen (mg/L)	Potential (ORP) (mV)
MW-1	$^{\Delta}$25.24	?? - 14'											
			4/12/05	4.27	20.97	**300	ND	0.51	7.5	5.6	ND	0.20	89
			1/27/05	4.36	20.88	**1,000	ND	ND	22	19	ND	0.14	224
			9/19/04	7.20	18.04	ND	ND	ND	ND	ND	ND	5.55	-113
			Dec-98	--	--	**5,000**	**13**	16	100	280	< 2.5	--	--
			Mar-97	--	--	**7,500**	**28**	< 25	**330**	1,200	< 250	--	--
			Dec-88	--	--	**1,100**	**6.5**	28	12	100	--	--	--
			Feb-88	--	--	840	**31**	35	8.7	47	--	--	--
MW-2	25.32	5 - 20											
			4/12/05	4.49	20.83	ND	ND	ND	ND	ND	***7.5	0.13	73
			1/27/05	4.57	20.75	ND	ND	ND	ND	ND	**6.3**	0.78	35
MW-3	25.39	4 - 19											
			4/12/05	4.20	21.19	ND	ND	ND	ND	ND	ND	0.21	131
			1/27/05	4.21	21.18	**27	ND	ND	ND	ND	1.4	0.48	244
MW-4	26.38	5 - 20											
			4/12/05	5.23	21.15	ND	ND	ND	ND	ND	***7.6	0.14	124
			1/27/05	5.28	21.10	ND	ND	ND	ND	ND	**8.2**	0.18	292
Practical Quantitation Limit:						***25 / ♦50***	***0.5***	***0.5***	***0.5***	***0.5***	***1***	***--***	***--***
Action Levels (ALs) / MaximumContaminant Levels (MCLs)[1]						***1000***	***1***	***150***	***300***	***1750***	***5***	***--***	***--***

NOTES:

TOC : *Top of Casing elevation surveyed by a Licensed Surveyor to National Geodetic Vertical Datum of 1988 (NGVD).*

bgs : *below ground surface.*

ug/L : *micrograms per liter - parts per billion.*

ND : *Not Detected at or above the laboratory's practical quantitation limit (PQL).*

BOLD PRINT : *Bold Print indicates concentrations are above regulatory Action Levels or MCL's.*

**** :*** *Laboratory indicates analytical results within quantitation range, but the chromatographic pattern was not the specified fuel.*

1: *Levels presented are based on either the established Maximum Contaminant Levels (MCLs) which are the California Code of Regulations (Title 22) or water quality goals for the Central Coast Region of the CRWQCB.*

♦ : *Due to the low level detections of contaminants during the January 27, 2005 sampling event, samples collected on April 14, 2005 were analyzed by EPA Methods 8015M & 8020, and as a result the detection limit for TPH-g is elevated to 50 ppb.*

TPH-g: *Total Petroleum Hydrocarbons as gasoline*

MTBE: *Methyl Tert Butyl Ether.*

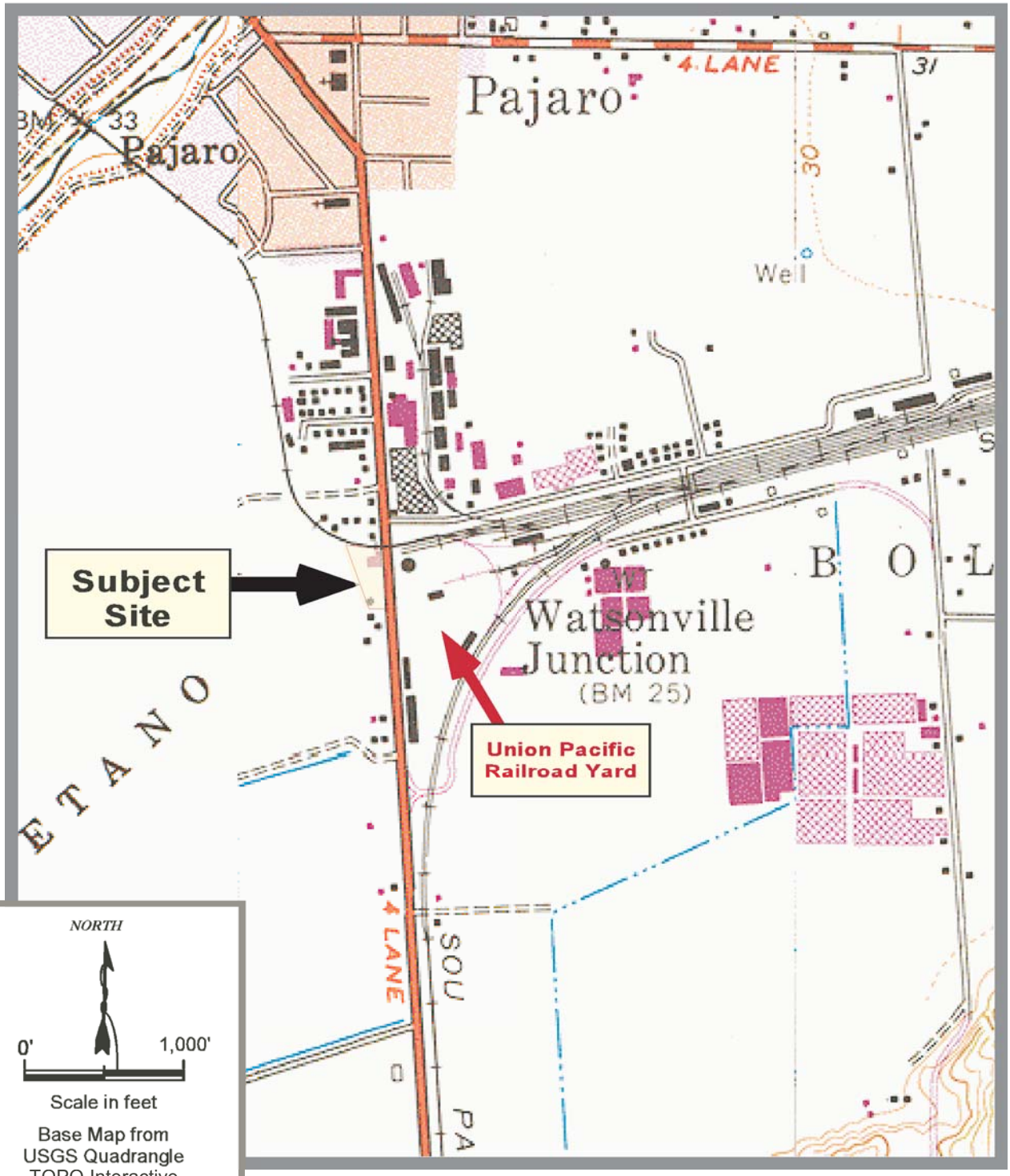
< X: *Not Detected at the elevated PQL, X, PQL elevated due to sample dilution.*

-- : *Data missing, not available, or not collected.*

*****:*** *Laboratory indicates result is possibly aged gasoline.*

******:*** *Confirmed by EPA Method 8260*

Δ: *McGregor Landsurveys noted an initial reporting error in the top of casing elevation reported for well MW-1. The top of casing elevation for well MW-1 was initially reported to be 25.47 feet, NAVD; the corrected elevation is 25.24 feet, NAVD.*



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Location Map
C&N Tractors
496-498 Salinas Road
Watsonville, California

FIGURE 1
Job # 22029

Explanation

MW-4
Elevation: 258.55'
TPH-g: 76,000 ppb
B: 23,000 ppb
T: 1,600 ppb
E: 1,600 ppb
X: 1,100 ppb
MTBE: *< 3 ppb
D.O.: 0.06 ppm

Groundwater Monitoring Well (MW) location, designation, groundwater elevation, and analytical results

Analytical Results are in ug/L, parts per billion (ppb)
Samples Analyzed for:
Total Petroleum Hydrocarbons as Gasoline (TPH-g),
Benzene (B),
Toluene (T),
Ethylbenzene (E),
Xylenes (X),
Methyl Tert Butyl Ether (MTBE)

Dissolved Oxygen (D.O.) was measured in the field and is presented in mg/L, parts per million (ppm)
* = Laboratory indicates results possiby aged gasoline.
** = Confirmed by EPA Method 8260
< X = Analyte not detected above laboratory detection limit, X

21.2'

Groundwater elevation contours, and flow direction.

Groundwater gradient measured on April 12, 2005 was 0.004 ft/ft to the east.

Notes: Monitoring well MW-1 was installed in 1987. Monitoring wells MW-2, 3, & 4 were installed on January 25, 2005. Well elevations were professionally surveyed by McGregor Land Surveys on February 16, 2005, License # 5946.

Railroad Tracks

Property Line

Salinas Road

Tractor Sales & Office

Agricultural Fields

Asphalt Lot
Open Air Tractor Storage

Access Roads

Repair Shop

Paint Shop

Parts & Storage

Fabrication Shop

MW-1
Elevation: 20.97'
TPH-g: *300 ppb
B: ND
T: 0.51 ppb
E: 7.5 ppb
X: 5.6 ppb
MTBE: ND
D.O.: 0.20 ppm

Former Underground Gas Tank
(550-gallon, Removed: April 1987)

MW-2
Elevation:20.83'
TPH-g: ND
B: ND
T: ND
E: ND
X: ND
MTBE: **7.5 ppb
D.O.: 0.13 ppm

MW-3
Elevation:21.19'
TPH-g: ND
B: ND
T: ND
E: ND
X: ND
MTBE: ND
D.O.: 0.21 ppm

MW-4
Elevation:21.15'
TPH-g: ND
B: ND
T: ND
E: ND
X: ND
MTBE: **7.6 ppb
D.O.: 0.14 ppm

21.2' 21.1' 21' 20.9' 21' 21.1' 21.2' 20.9'

NORTH
0' 50'
Approximate Scale in feet
Base Map from
Aerial Photo

Active Fuel Leak Site
(former railroad yard)
8 Groundwater Monitoring Wells

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FIGURE 2
Job # 22029

Groundwater Monitoring Results
April 12, 2005
C&N Tractors
496-498 Salinas Road
Watsonville, California

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APPENDIX A

Standard Operating Procedure - Monitoring Well Sampling
&
Field Data Sheets

Appendix A
Standard Operating Procedure - Monitoring Well Sampling

Weber, Hayes and Associates' groundwater monitoring field methodology is based on procedures specified in the *LUFT Field Manual*. The first step in groundwater well sampling is for Weber, Hayes and Associates field personnel to measure the depth-to-groundwater to the nearest hundredth (0.01) of a foot with an electric sounder. If the well appears to be pressurized, or the groundwater level is fluctuating, measurements are made until the groundwater level stabilizes, and a final depth-to groundwater measurement is taken and recorded. After the depth-to-groundwater is measured, the well is then checked for the presence of free product with a clear, disposable polyethylene bailer. If free product is present, the thickness of the layer is recorded, and the product is bailed to a sheen. All field data (depth-to-groundwater, well purge volume, physical parameters, and sampling method) are recorded on field data sheets (see attached). Because removing free product may skew the data, wells that contain free product are not used in groundwater elevation and gradient calculations.

After measuring the depth-to-groundwater, each well, starting with the cleanest well (based on analytical results from the last sampling event), is purged with a low flow submersible electric pump. During purging the physical parameters of temperature, conductivity, pH, dissolved oxygen (D.O.) concentration, and Oxidation-Reduction Potential (ORP) of the purge water are monitored with a QED MP20 Micropurge Flow Through Cell equipped meter to insure that these parameters have stabilized (are within ~ 15 percent of the previous measurement). The QED MP20 meter is capable of continuously monitoring the physical parameters of the purge water via the flow through cell and providing an alarm to indicate when the physical parameters have stabilized to the users specifications. Purging is determined to be complete (stabilized aquifer conditions reached) after the removal of approximately three to five well volumes of water or when the physical parameters have stabilized. Dissolved oxygen and ORP measurements are used as an indicator of intrinsic bioremediation within the contaminant plume. All field instruments are calibrated before use.

All purge water is stored on site in DOT-approved, 55-gallon drums for disposal by a state-licensed contractor pending laboratory analysis for fuel hydrocarbons.

After purging, the water level in the well is allowed to recover to 80 percent of its original depth before a sample is collected. After water level recovery, a groundwater sample is collected from each well with a new, disposable bailer, and decanted into the appropriate laboratory-supplied sample container(s). The sample containers at this site were 40-ml. vials. Each vial was filled until a convex meniscus formed above the vial rim, then sealed with a Teflon®-septum cap, and inverted to insure that there were no air bubbles or head space in the vial. All samples are labeled in the field and transported in insulated containers cooled with blue ice to state-certified laboratories under proper chain of custody procedures.

All field and sampling equipment is decontaminated before, between, and after measurements or sampling by washing in a Liqui-Nox and tap water solution, rinsing with tap water, and rinsing with distilled water.

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Text Page 1 / 6
INDICATE ATTACHMENTS THAT APPLY
- Site Map
- ES Data Sheets
- ___ Geologic Logs
- ___ Photo Sheets
- ___ COC's
- ___ Chargeable Materials

Client: **C & N Tractors**				Date: **April 12, 2005**
Site Location: **496 Salinas Road, Watsonville, CA**				Study #: **22029.Q**
Field Tasks: ☐ Drilling	☑ Sampling	☑ Other (see below):		Weather Conditions: Partial High Fog; Mild
2nd Quarter 2005 Groundwater Monitoring				
Personnel / Company On-Site: **Jered Chaney (Weber, Hayes and Associates: WHA)**				

FIELD WORK PLANNING:

Performed on: April 11, 2005

Meet with Project Manager: [X] Yes [ ] No
Number of Wells to be Sampled: 4 Wells with Dissolved Oxygen (D.O.) & Depth to Groundwater.
Sample Wells: MW-1 - 4.
Analyze for: TPH-g, BTEX, & MtBE by EPA Methods 8015M / 8020
Proposed Sampling Date: April 12, 2005

ON-SITE FIELD WORK:

Arrive on-site at 0745 to conduct 2nd Quarter 2005 Quarterly Groundwater Monitoring Well Sampling.

LABORATORY:

JC Send all analytical to: Entech Analytical Laboratory, 408.588.0200 - 3334 Victor Court, Santa Clara, CA

GROUNDWATER MONITORING FIELD WORK STANDARD OPERATING PROCEDURES:

(Initial)

JC
- All sampling is conducted according to Standard Operating Procedure (SOP) 10I/
- All pertinant information regarding the well, including water quality physical parameters are recorded on the following pages.
- All samples are placed in a refrigerated cooler immediately after sampling.
- All groundwater monitoring/purging/sampling equipment is decontaminated according to SOP 10B/at the beginning of on-site work, in between each well, and at the end of work
- All purge water is propoerly containerized in 55-gallon drums, or another suitable container, for later removal by a licensed subcontractor.
- All samples are recorded on field Chain-of-Custody sheets for documentation of proper transportation to the appropriate Laboratory.

INSTRUMENT CALIBRATION:

QED MP20 Flow Through Cell: Temperature = 10.07C pH = 7.00 & 10.00 Electrical Conductivity = 718 mS/cm Barometric Pressure = 760 mmHg

D.O. % Saturation = 100% Oxidation Reduction Potential (ORP) = 250 mV

BEGIN SAMPLING WELLS:

MW-3, MW-4, MW-2, MW-1

COMMENTS:

All wells will be purged until the QED MP20 unit indicates that the physical parameters of the water (pH, Conductivity, Temp, D.O., and ORP) have stabilized to within ~ 15%, or once four casing volumes in the well column requiring sampling have been removed (see Groundwater Monitoring Well Sampling Field Data Sheet(s) for details). Wells will be purged form the bottom up and all WHA SOPs. Wells will only be sampling using a Bladder Pump or a disposable bailer, as per RWQCB guidlines.

4/12/05
Signature of Field

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
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Location	Groundwater Depth	Total Depth of Well	D.O. (mg/L)	ORP (mV)	Floating Product (comments)
MW-1	4.27'	14'	0.20	89	NoFP; High Odor
MW-2	4.49'	20'	0.13	73	NoFP; No Odor
MW-3	4.20'	19'	0.21	131	NoFP; No Odor
MW-4	5.23'	20'	0.14	124	NoFP; No Odor

JC
4/12/05

HOW MANY PURGE DRUMS WERE LEFT ON-SITE: 1 APPROXIMATE VOLUME (gallons): 55
CALL PURGE WATER REMOVAL SUBCONTRACTOR ON: 4/12/05
DRUMS WILL BE PURGED ON: ? ? ?

COMMENTS:

4/12/05
Signature of Field Personel & Date

GROUNDWATER MONITORING WELL SAMPLING FIELD DATA SHEET

Project Name/No.: C & N Tractors / 22029.Q **Date:** April 12, 2005

Sample No.: MW-3 **Sample Location:** MW-3

Samplers Name: Jered Chaney **Recorded by:** JC

Purge Equipment:

_____ Bailer: Disposable or Acrylic
X Whaler # 1
_____ Bladder Pump
_____ Redi-flow Pump (Grundfus)

Sample Equipment:

X Disposable Bailer
_____ Whaler # _____
_____ Bladder Pump
_____ Submersible Pump

Analyses Requested (cricle all that apply):

(TPH-gas, BTEX, MTBE) ~~1,2 - DCA, EDB, 8260 Fuel Oxygenates, Methanol, Ethanol~~
~~TPH-diesel, TPH-Motor Oil, TPH-Heating Oil~~
~~Intrinsic Bio. Parameters~~

Number and Types of Bottle Used: *3 x 40 mL VOA's*

Well Number: MW-3
Depth to Water: 4.20' TOC
Well Depth: 19' BGS or TOC
Height W-Column: 14.80' feet (well depth - depth to water)
Volume in Well: 2.36 gallons (casing volume X height)
Gallons to purge: 9.47 gallons (volume X 4)

Well Diameter: 2" **with Casing Volume of:**

(2" = (0.16 Gallon/Feet))
4" = (0.65 Gallon/Feet)
5" = (1.02 Gallon/Feet)
6" = (1.47 Gallon/Feet)
8" = (2.61 Gallon/Feet)

Lab: *Entech Analytical* **Transportation:** *Courier*

Time (24 hr.)	Volume Purged (Gallons)	Temperature (°C)	Conductivity (ms/cm)	D.O. (ppm)	pH	ORP (mV)	Turbidity: Color, Fines	Micropurge Paramaters Stabilized
0827	0	16.41	0.894	3.57	6.93	143	High: Brown, Many Fines	
0828	1	16.71	0.903	0.65	6.94	142	Moderate: Brown, Mod. Fines	
0829	2	16.82	0.907	0.38	6.92	140	↓ ↓ ↓	
0829	3	16.89	0.909	0.32	6.90	140		
0830	4	16.95	0.909	0.30	6.91	140	Low: Clear, brown, Minor Fines	
0831	6	17.04	0.917	0.25	6.90	139	↓ ↓ ↓	
0832	8	17.05	0.939	0.23	6.86	137		
0833	10	17.07	0.952	0.21	6.83	131	Low: Clear, Minor Fines	
Stop:	Purge Complete							

Wait for 80% well volume recovery prior to sampling.

Calculate depth to water (from TOC), for 80% well volume recovery:

Calculate 80% of orginal well volume:

Original Height of Water Column = 14.80' x 0.8 = 11.84' - (Well Depth) 19' = Depth to water 7.16'

Time: 0835 1st measured depth to water, 4.47' feet below TOC. Is well within 80% of original well casing volume: Yes ✓ No ____
Time: ~~JC~~ 1st measured depth to water, ~~JC~~ feet below TOC. Is well within 80% of original well casing volume: Yes ____ No ____
Time: ____ 1st measured depth to water, ____ feet below TOC. Is well within 80% of original well casing volume: Yes ~~JC~~ No ____

Sample Well

Time: 0835 Sample ID: MW-3 Depth: 4.47' feet below TOC

Comments: No floating Product; No Odor

GROUNDWATER MONITORING WELL SAMPLING FIELD DATA SHEET

Project Name/No.: C & N Tractors / 22029.Q **Date:** April 12, 2005

Sample No.: MW-4 **Sample Location:** MW-4

Samplers Name: Jered Chaney **Recorded by:** JC

Purge Equipment:

_____ Bailer: Disposable or Acrylic
X Whaler # 1
_____ Bladder Pump
_____ Redi-flow Pump (Grundfus)

Sample Equipment:

X Disposable Bailer
_____ Whaler # _____
_____ Bladder Pump
_____ Submersible Pump

Analyses Requested (cricle all that apply):

~~TPH-gas, BTEX, MTBE~~, 1,2 - DCA, EDB, 8260 Fuel Oxygenates, Methanol, Ethanol
~~TPH-diesel, TPH-Motor Oil, TPH-Heating Oil~~
~~Intrinsic Bio. Parameters~~

Number and Types of Bottle Used: *3 x 40 mL VOA's*

Well Number: MW-4 **Well Diameter:** 2" **with Casing Volume of:**

Depth to Water: 5.23 TOC — 2" = (0.16 Gallon/Feet)
Well Depth: 20' BGS or TOC — 4" = (0.65 Gallon/Feet)
Height W-Column: 14.77' feet (well depth - depth to water) — 5" = (1.02 Gallon/Feet)
Volume in Well: 2.36 gallons (casing volume X height) — 6" = (1.47 Gallon/Feet)
Gallons to purge: 9.45 gallons (volume X 4) — 8" = (2.61 Gallon/Feet)

Lab: *Entech Analytical* **Transportation:** *Courier*

Time (24 hr.)	Volume Purged (Gallons)	Temperature (°C)	Conductivity (ms/cm)	D.O. (ppm)	pH	ORP (mV)	Turbidity: Color, Fines	Micropurge Paramaters Stabilized
0917	0	15.22	1.090	3.26	6.69	128	High: Brown, Many Fines	
0918	1	15.53	1.057	0.73	6.82	128	↓ ↓ ↓	
0918	2	15.64	1.039	0.43	6.84	128	Moderate: Clear.brown, Mod.	
0919	3	15.76	1.025	0.26	6.87	128	Low: Clear, brown, Minor fines	
0919	4	15.80	1.019	0.22	6.87	127	↓ ↓ ↓	
0920	6	15.88	1.014	0.18	6.90	126		
0922	8	15.90	1.012	0.15	6.92	126		
0923	10	15.94	1.010	0.14	6.92	124	↓ ↓ ↓	
Stop:	Purge Complete.							

Wait for 80% well volume recovery prior to sampling.

Calculate depth to water (from TOC), for 80% well volume recovery:

Calculate 80% of orginal well volume:

Original Height of Water Column = 14.77' x 0.8 = 11.81' - (Well Depth) 20' = Depth to water 8.18'

Time: 0929 1st measured depth to water, 5.66' feet below TOC. — Is well within 80% of original well casing volume: Yes ✓ No____
Time: ____ 1st measured depth to water, ____ feet below TOC. — Is well within 80% of original well casing volume: Yes ____ No____
Time: ____ 1st measured depth to water, ____ feet below TOC. — Is well within 80% of original well casing volume: Yes ____ No____

Sample Well

Time: 0924 Sample ID: MW-4 Depth: 5.66' feet below TOC

Comments: No floating product; No Odor.

GROUNDWATER MONITORING WELL SAMPLING FIELD DATA SHEET

Project Name/No.: *C & N Tractors / 22029.Q* **Date:** *April 12, 2005*

Sample No.: MW-2 **Sample Location:** MW-2

Samplers Name: *Jered Chaney* **Recorded by:** *JC*

Purge Equipment:

_____ Bailer: Disposable or Acrylic
x Whaler # 1
_____ Bladder Pump
_____ Redi-flow Pump (Grundfus)

Sample Equipment:

x Disposable Bailer
_____ Whaler # _____
_____ Bladder Pump
_____ Submersible Pump

Analyses Requested (cricle all that apply):

(TPH-gas, BTEX, MTBE) ~~1,2 - DCA, EDB, 8260 Fuel Oxygenates, Methanol, Ethanol~~
~~TPH-diesel, TPH-Motor Oil, TPH-Heating Oil~~
~~Intrinsic Bio. Parameters~~

Number and Types of Bottle Used: *3 x 40 mL VOA's*

Well Number: MW-2 **Well Diameter:** 2" **with Casing Volume of:**

Depth to Water: 4.99' TOC — (2" = 0.16 Gallon/Feet)
Well Depth: 20' BGS or TOC — 4" = (0.65 Gallon/Feet)
Height W-Column: 15.51' feet (well depth - depth to water) — 5" = (1.02 Gallon/Feet)
Volume in Well: 2.48 gallons (casing volume X height) — 6" = (1.47 Gallon/Feet)
Gallons to purge: 9.92 gallons (volume X 4) — 8" = (2.61 Gallon/Feet)

Lab: *Entech Analytical* **Transportation:** *Courier*

Time (24 hr.)	Volume Purged (Gallons)	Temperature (°C)	Conductivity (ms/cm)	D.O. (ppm)	pH	ORP (mV)	Turbidity: Color, Fines	Micropurge Paramaters Stabilized
0953	0	17.10	1.114	7.82	6.68	128	High: Brown, Many Fines	
0954	1	18.45	1.206	0.97	6.74	126	Moderate: Clear, brown, Mod. Fines	
0954	2	18.50	1.209	0.41	6.76	121	↓ ↓ ↓	
0955	3	18.52	1.208	0.27	6.75	118	Low: Clear, Minor Fines	
0956	4	18.49	1.208	0.22	6.75	113		
0957	6	18.48	1.218	0.21	6.74	107		
0958	8	18.52	1.235	0.14	6.71	87		
0959	10	18.55	1.253	0.13	6.72	73		
Step: Purge Complete.								

Wait for 80% well volume recovery prior to sampling.

Calculate depth to water (from TOC), for 80% well volume recovery:

Calculate 80% of orginal well volume:

Original Height of Water Column = 15.51' x 0.8 = 12.40' - (Well Depth) 20' = Depth to water 7.6'

Time: 1000 1st measured depth to water, 4.99' feet below TOC. — Is well within 80% of original well casing volume: Yes ✓ No____
Time: ~~JC~~ 1st measured depth to water, ~~JC~~ feet below TOC. — Is well within 80% of original well casing volume: Yes ~~JC~~ No____
Time: ~~JC~~ 1st measured depth to water, ~~JC~~ feet below TOC. — Is well within 80% of original well casing volume: Yes ~~JC~~ No____

Sample Well

Time: 1000 Sample ID: MW-2 Depth: 4.99' feet below TOC

Comments: No floating product; No Odor.

GROUNDWATER MONITORING WELL SAMPLING FIELD DATA SHEET

Project Name/No.: *C & N Tractors / 22029.Q* **Date:** *April 12, 2005*

Sample No.: MW-1 **Sample Location:** MW-1

Samplers Name: *Jered Chaney* **Recorded by:** *JC*

Purge Equipment:

- ____ Bailer: Disposable or Acrylic
- X Whaler # 1
- ____ Bladder Pump
- ____ Redi-flow Pump (Grundfus)

Sample Equipment:

- X Disposable Bailer
- ____ Whaler # ____
- ____ Bladder Pump
- ____ Submersible Pump

Analyses Requested (cricle all that apply):

~~TPH-gas, BTEX, MTBE~~, ~~1,2 DCA, EDB, 8260 Fuel Oxygenates, Methanol, Ethanol~~

~~TPH-diesel, TPH-Motor Oil, TPH-Heating Oil~~

~~Intrinsic Bio. Parameters~~

Number and Types of Bottle Used: *3 x 40 mL VOA's*

Well Number: MW-1

Depth to Water: 4.27' TOC

Well Depth: 14' BGS or TOC

Height W-Column: 9.73' feet (well depth - depth to water)

Volume in Well: 1.55 gallons (casing volume X height)

Gallons to purge: 6.22 gallons (volume X 4)

Well Diameter: 2" **with Casing Volume of:**

- 2" = (0.16 Gallon/Feet)
- 4" = (0.65 Gallon/Feet)
- 5" = (1.02 Gallon/Feet)
- 6" = (1.47 Gallon/Feet)
- 8" = (2.61 Gallon/Feet)

Lab: *Entech Analytical* **Transportation:** *Courier*

Time (24 hr.)	Volume Purged (Gallons)	Temperature (°C)	Conductivity (ms/cm)	D.O. (ppm)	pH	ORP (mV)	Turbidity: Color, Fines	Micropurge Paramaters Stabilized
1030	0	15.56	0.856	8.48	6.18	101	High: Dark brown, Many fines	
1031	1	17.50	1.047	1.62	6.24	99	Moderate: Brown, Mod. fines	
1032	2	17.68	1.147	~~6.35~~ 0.42 (DE)	6.35	95	Low: Clear, Minor Fines	
1032	3	12.90	1.218	0.27	6.44	95		
1033	4	17.91	1.232	0.25	6.47	93		
1034	5	18.05	1.248	0.21	6.51	91		
1034	6	18.08	1.251	0.22	6.51	90		
1035	7	18.10	1.256	0.20	6.52	89		
Stop: Purge Complete.								

Wait for 80% well volume recovery prior to sampling.

Calculate depth to water (from TOC), for 80% well volume recovery:

Calculate 80% of orginal well volume:

Original Height of Water Column = 9.73' x 0.8 = 7.84' - (Well Depth) 14' = Depth to water 6.21'

Time: 1036 1st measured depth to water, 4.58' feet below TOC. Is well within 80% of original well casing volume: Yes ✓ No ____

Time: ~~____~~ 1st measured depth to water, ~~____~~ feet below TOC. Is well within 80% of original well casing volume: Yes ~~____~~ No ____

Time: ~~____~~ 1st measured depth to water, ~~____~~ feet below TOC. Is well within 80% of original well casing volume: Yes ~~____~~ No ____

Sample Well

Time: 1036 Sample ID: MW-1 Depth: 4.58' feet below TOC

Comments: No Floating product; High Odor.

APPENDIX B

Certificates of Analysis and Chain-of-Custody Documentation - Groundwater Samples

Entech Analytical Labs, Inc.

3334 Victor Court • Santa Clara, CA 95054 • (408) 588-0200 • Fax (408) 588-0201

Jered Chaney
Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076

Certificate ID: 43153 - 4/19/2005 12:43:31 PM

Order Number: 43153
Project Name: C&N Tractors
Project Number: 22029.Q

Date Received: 4/12/2005 2:40:56 PM
P.O. Number: 22029.Q

Certificate of Analysis - Final Report

On April 12, 2005, samples were received under chain of custody for analysis. Entech analyzes samples "as received" unless otherwise noted. The following results are included:

Matrix	Test	Comments
Liquid	EPA 8260B Gas/BTEX/MTBE	

Entech Analytical Labs, Inc. is certified for environmental analyses by the State of California (#2346).
If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,

Laurie Glantz-Murphy
Laboratory Director

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Jered Chaney

Project Number: 22029.Q
Project Name: C&N Tractors
Date Received: 4/12/2005
P.O. Number: 22029.Q
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 43153-001 **Sample ID: MW-1** **Matrix:** Liquid **Sample Date:** 4/12/2005 10:36 AM

EPA 8015 MOD. (Purgeable)

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	300		1	50	µg/L	N/A	N/A	04/15/2005	WGC4050413

Note: TPH as Gasoline reported value contains heavy hydrocarbons within the TPH as Gasoline quantitation range.

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	183***	65 - 135

Analyzed by: mruan
Reviewed by: MTU

*** High surrogate recovery for BFB due to matrix interference.

EPA 8020 - Aromatic Organics Using GC/PID

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.5	µg/L	N/A	N/A	04/15/2005	WGC4050413
Toluene	0.51		1	0.5	µg/L	N/A	N/A	04/15/2005	WGC4050413
Ethyl Benzene	7.5		1	0.5	µg/L	N/A	N/A	04/15/2005	WGC4050413
Xylenes, Total	5.6		1	0.5	µg/L	N/A	N/A	04/15/2005	WGC4050413
Methyl-t-butyl Ether	ND		1	1	µg/L	N/A	N/A	04/15/2005	WGC4050413

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	143***	65 - 135

Analyzed by: mruan
Reviewed by: MTU

*** High surrogate recovery for BFB due to matrix interference.

Detection Limit = Detection Limit for Reporting.
DF = Dilution and/or Prep Factor including sample volume adjustments.
ND = Not Detected at or above the Detection Limit.
B = Analyte found in associated Method Blank.

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Jered Chaney

Project Number: 22029.Q
Project Name: C&N Tractors
Date Received: 4/12/2005
P.O. Number: 22029.Q
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 43153-002 **Sample ID: MW-2** **Matrix:** Liquid **Sample Date:** 4/12/2005 10:00 AM

EPA 8015 MOD. (Purgeable)

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND		1	50	µg/L	N/A	N/A	04/14/2005	WGC4050413

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	97.4	65 - 135

Analyzed by: mruan
Reviewed by: MTU

EPA 8020 - Aromatic Organics Using GC/PID

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.5	µg/L	N/A	N/A	04/14/2005	WGC4050413
Toluene	ND		1	0.5	µg/L	N/A	N/A	04/14/2005	WGC4050413
Ethyl Benzene	ND		1	0.5	µg/L	N/A	N/A	04/14/2005	WGC4050413
Xylenes, Total	ND		1	0.5	µg/L	N/A	N/A	04/14/2005	WGC4050413

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	98.0	65 - 135

Analyzed by: mruan
Reviewed by: MTU

EPA 8260B - Gas Chromatography/Mass Spectrometry (GC/MS)
EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Methyl-t-butyl Ether	7.5		1	1	µg/L	N/A	N/A	04/15/2005	WMS1050415

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	97.9	75 - 125
Dibromofluoromethane	107	75 - 125
Toluene-d8	101	75 - 125

Analyzed by: Xbian
Reviewed by: MTU

Detection Limit = Detection Limit for Reporting.
DF = Dilution and/or Prep Factor including sample volume adjustments.
ND = Not Detected at or above the Detection Limit.
B = Analyte found in associated Method Blank.

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Jered Chaney

Project Number: 22029.Q
Project Name: C&N Tractors
Date Received: 4/12/2005
P.O. Number: 22029.Q
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 43153-003 **Sample ID: MW-3** **Matrix:** Liquid **Sample Date:** 4/12/2005 8:35 AM

EPA 8015 MOD. (Purgeable)

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND		1	50	µg/L	N/A	N/A	04/14/2005	WGC4050413

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	95.5	65 - 135

Analyzed by: mruan
Reviewed by: MTU

EPA 8020 - Aromatic Organics Using GC/PID

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.5	µg/L	N/A	N/A	04/14/2005	WGC4050413
Toluene	ND		1	0.5	µg/L	N/A	N/A	04/14/2005	WGC4050413
Ethyl Benzene	ND		1	0.5	µg/L	N/A	N/A	04/14/2005	WGC4050413
Xylenes, Total	ND		1	0.5	µg/L	N/A	N/A	04/14/2005	WGC4050413
Methyl-t-butyl Ether	ND		1	1	µg/L	N/A	N/A	04/14/2005	WGC4050413

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	95.2	65 - 135

Analyzed by: mruan
Reviewed by: MTU

Detection Limit = Detection Limit for Reporting.
DF = Dilution and/or Prep Factor including sample volume adjustments.
ND = Not Detected at or above the Detection Limit.
B = Analyte found in associated Method Blank.

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Weber, Hayes and Associates
120 Westgate Drive
Watsonville, CA 95076
Attn: Jered Chaney

Project Number: 22029.Q
Project Name: C&N Tractors
Date Received: 4/12/2005
P.O. Number: 22029.Q
Sample Collected by: Client

Certificate of Analysis - Data Report

Lab # : 43153-004 **Sample ID: MW-4** **Matrix:** Liquid **Sample Date:** 4/12/2005 9:24 AM

EPA 8015 MOD. (Purgeable)

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND		1	50	µg/L	N/A	N/A	04/14/2005	WGC4050413

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	96.1	65 - 135

Analyzed by: mruan
Reviewed by: MTU

EPA 8020 - Aromatic Organics Using GC/PID

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND		1	0.5	µg/L	N/A	N/A	04/14/2005	WGC4050413
Toluene	ND		1	0.5	µg/L	N/A	N/A	04/14/2005	WGC4050413
Ethyl Benzene	ND		1	0.5	µg/L	N/A	N/A	04/14/2005	WGC4050413
Xylenes, Total	ND		1	0.5	µg/L	N/A	N/A	04/14/2005	WGC4050413

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	98.2	65 - 135

Analyzed by: mruan
Reviewed by: MTU

EPA 8260B - Gas Chromatography/Mass Spectrometry (GC/MS)
EPA 5030B - Purge-and-Trap for Aqueous Samples

Parameter	Result	Flag	DF	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Methyl-t-butyl Ether	7.6		1	1	µg/L	N/A	N/A	04/16/2005	WMS1050415

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	97.3	75 - 125
Dibromofluoromethane	112	75 - 125
Toluene-d8	102	75 - 125

Analyzed by: Xbian
Reviewed by: MTU

Detection Limit = Detection Limit for Reporting.
DF = Dilution and/or Prep Factor including sample volume adjustments.
ND = Not Detected at or above the Detection Limit.
B = Analyte found in associated Method Blank.

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Method Blank

Liquid

Reviewed by: MTU - 04/18/05

QC Batch ID: WGC4050413

QC Batch ID Analysis Date: 4/13/2005

Method Blank **Method: EPA 8015 MOD. (Purgeable)**

Parameter	Result	DF	PQLR	Units
TPH as Gasoline	ND	1	50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	**95.9**	65 - 135

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Method Blank

Liquid

Reviewed by: MTU - 04/18/05

QC Batch ID: WGC4050413

QC Batch ID Analysis Date: 4/13/2005

Method Blank **Method: EPA 8020**

Parameter	Result	DF	PQLR	Units
Benzene	ND	1	0.50	µg/L
Ethyl Benzene	ND	1	0.50	µg/L
Methyl-t-butyl Ether	ND	1	1.0	µg/L
Toluene	ND	1	0.50	µg/L
Xylenes, Total	ND	1	0.50	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	**96.0**	65 - 135

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Method Blank

Liquid

QC Batch ID: WMS1050415

Reviewed by: MTU - 04/18/05

QC Batch ID Analysis Date: 4/15/2005

Method Blank **Method: EPA 8260B**

Parameter	Result	DF	PQLR	Units
Methyl-t-butyl Ether	ND	1	1.0	µg/L

Surrogate for Blank	% Recovery	Control Limits
4-Bromofluorobenzene	**96.3**	75 - 125
Dibromofluoromethane	**108**	75 - 125
Toluene-d8	**102**	75 - 125

Entech Analytical Labs, Inc.

3334 Victor Court , Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

Quality Control - Laboratory Control Spike / Duplicate Results

Liquid

Reviewed by: MTU - 04/18/05

QC BatchID: WGC4050413

Analysis Date: 4/13/2005

Method: EPA 8015 MOD. (Purgeable) **Conc. Units: µg/L**

LCS

Parameter	Blank (MDL)	Spike Amt	SpikeResult	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<4	250	260	**102**			65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**99.6**	65 - 135

LCSD

Parameter	Blank (MDL)	Spike Amt	SpikeResult	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	<4	250	250	**100**	**2.0**	25.0	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**96.5**	65 - 135

Method: EPA 8020 **Conc. Units: µg/L**

LCS

Parameter	Blank (MDL)	Spike Amt	SpikeResult	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	<0.06	8.0	8.4	**105**			65 - 135
Ethyl Benzene	<0.04	8.0	7.8	**98.1**			65 - 135
Methyl-t-butyl Ether	<0.08	8.0	8.2	**103**			65 - 135
Toluene	<0.08	8.0	8.3	**104**			65 - 135
Xylenes, total	<0.2	24	24	**100**			65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**97.8**	65 - 135

LCSD

Parameter	Blank (MDL)	Spike Amt	SpikeResult	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	<0.06	8.0	8.0	**100**	**4.1**	25.0	65 - 135
Ethyl Benzene	<0.04	8.0	7.4	**93.0**	**5.4**	25.0	65 - 135
Methyl-t-butyl Ether	<0.08	8.0	7.6	**94.6**	**8.4**	25.0	65 - 135
Toluene	<0.08	8.0	7.9	**99.1**	**4.4**	25.0	65 - 135
Xylenes, total	<0.2	24	23	**96.7**	**3.4**	25.0	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**94.4**	65 - 135

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Quality Control - Laboratory Control Spike / Duplicate Results

Liquid

Reviewed by: MTU - 04/18/05

QC BatchID: WMS1050415

Analysis Date: 4/15/2005

Method: EPA 8260B **Conc. Units: µg/L**

LCS

Parameter	Blank (MDL)	Spike Amt	SpikeResult	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	<0.2	20	20	**101**			80 - 120
Methyl-t-butyl Ether	<0.3	20	22	**112**			80 - 120
Toluene	<0.2	20	20	**97.5**			80 - 120

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**95.2**	75 - 125
Dibromofluoromethane	**101**	75 - 125
Toluene-d8	**96**	75 - 125

LCSD

Parameter	Blank (MDL)	Spike Amt	SpikeResult	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	<0.2	20	18	**92.0**	**8.8**	25.0	80 - 120
Methyl-t-butyl Ether	<0.3	20	21	**104**	**7.0**	25.0	80 - 120
Toluene	<0.2	20	18	**89.5**	**8.6**	25.0	80 - 120

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**94.3**	75 - 125
Dibromofluoromethane	**100**	75 - 125
Toluene-d8	**96.3**	75 - 125

Entech Analytical Labs, Inc.

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Quality Control - Matrix Spike / Duplicate Results
Liquid

QC Batch ID: WGC4050413

Reviewed by: MTU - 04/18/05

QC Batch ID Analysis Date: 4/13/2005

Method EPA 8015 MOD. (Purgeable)

Conc. Units: µg/L

MS

SampleNumber: 43156-001 Parameter	Sample Result	Spike Amount	Spike Result	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	ND	250	251	4/13/2005	**100**			65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**96.9**	65 - 135

MSD

SampleNumber: 43156-001 Parameter	Sample Result	Spike Amount	Spike Result	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
TPH as Gasoline	ND	250	255	4/13/2005	**102**	**1.5**	25	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**95.9**	65 - 135

Method EPA 8020

Conc. Units: µg/L

MS

SampleNumber: 43156-001 Parameter	Sample Result	Spike Amount	Spike Result	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	ND	2.8	2.96	4/13/2005	**105**			65 - 135
Ethyl Benzene	ND	3.7	3.00	4/13/2005	**81.7**			65 - 135
Methyl-t-butyl Ether	ND	26	25.9	4/13/2005	**98.4**			65 - 135
Toluene	ND	16	15.7	4/13/2005	**95.7**			65 - 135
Xylenes, total	ND	20	16.5	4/13/2005	**84.3**			65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**96.3**	65 - 135

MSD

SampleNumber: 43156-001 Parameter	Sample Result	Spike Amount	Spike Result	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	ND	2.8	2.97	4/13/2005	**106**	**0.3**	25	65 - 135
Ethyl Benzene	ND	3.7	2.98	4/13/2005	**81.2**	**0.7**	25	65 - 135
Methyl-t-butyl Ether	ND	26	23.8	4/13/2005	**90.4**	**8.4**	25	65 - 135
Toluene	ND	16	15.7	4/13/2005	**95.6**	**0.2**	25	65 - 135
Xylenes, total	ND	20	16.4	4/13/2005	**83.8**	**0.6**	25	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**94.2**	65 - 135

Entech Analytical Labs, Inc.

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Quality Control - Matrix Spike / Duplicate Results
Liquid

QC Batch ID: WMS1050415

Reviewed by: MTU - 04/18/05

QC Batch ID Analysis Date: 4/15/2005

Method EPA 8260B

Conc. Units: µg/L

MS

SampleNumber: 43159-003 Parameter	Sample Result	Spike Amount	Spike Result	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	ND	20	20.2	4/15/2005	**101**			65 - 135
Methyl-t-butyl Ether	1.42	20	29.0	4/15/2005	**140*** **			65 - 135
Toluene	ND	20	19.2	4/15/2005	**96.0**			65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**94.2**	75 - 125
Dibromofluoromethane	**117**	75 - 125
Toluene-d8	**104**	75 - 125

MSD

SampleNumber: 43159-003 Parameter	Sample Result	Spike Amount	Spike Result	Analysis Date	% Recovery	RPD	RPD Limits	Recovery Limits
Benzene	ND	20	21.4	4/15/2005	**107**	**5.8**	25	65 - 135
Methyl-t-butyl Ether	1.42	20	28.8	4/15/2005	**140*** **	**0.7**	25	65 - 135

***The % recovery of MTBE in MS & MSD is outside of laboratory control limit but within % RPD limit.

Toluene	ND	20	21.4	4/15/2005	**107**	**10.8**	25	65 - 135

Surrogate	% Recovery	Control Limits
4-Bromofluorobenzene	**92.2**	75 - 125
Dibromofluoromethane	**118**	75 - 125
Toluene-d8	**103**	75 - 125

Weber, Hayes & Associates
Hydrogeology and Environmental Engineering
120 Westgate Dr., Watsonville, CA 95076
(831) 722-3580 (831) 662-3100
Fax: (831) 722-1159

CHAIN -OF-CUSTODY RECORD

1 OF 1

PROJECT NAME AND JOB #: C & N Tractors/ 22029.Q

LABORATORY: Entech

SEND CERTIFIED RESULTS TO: Weber, Hayes & Associates - Attention: Jered Chaney

TURNAROUND TIME: (Standard Five-Day) 48hr Rush 72hr Rush

ELECTRONIC DELIVERABLE FORMAT: ☒ YES ☐ NO

GLOBAL I.D.: T0605300360

Sampler: Jered Chaney

Date: 4/12/05

Field Point Name (Geo Tracker)	Sample Identification	Sample Depth	Date Sampled	Time Sampled	Matrix	SAMPLE CONTAINERS: 40 mL VOAs (preserved)	1 Liter Amber Jars	____mL Poly Bottle	Liner Acetate or Brass	REQUESTED ANALYSIS: Total Petroleum Hydrocarbons: TPH-Diesel	Total Recoverable Petroleum Hydrocarbons	TPH-Gas, BTEX, & MtBE by EPA Methods 8015M - 8020	Volatile Organics: Fuel Oxygenates EPA Method# 8260	EDB EPA Method# 8260	Methanol EPA Method# 8015M	1,2-DCA by EPA Method# 8260	Additional Analysis: Total Lead	
MW-1	MW-1	4.58'	4/12/05	1036	Aq	3						X					43153-001	
MW-2	MW-2	4.99'	↓	1000	↓	3						X						002
MW-3	MW-3	4.47'		0835		3						X						003
MW-4	MW-4	5.66'		0924		3						X						004

RELEASED BY: / **Date & Time** / **RECEIVED BY:** / **Date & Time**

1.) Jen Chu — 4/12/05 1300 — [signature] — 4/12/05 1300
2.) [signature] — 4/14 & 14/0
3.)
4.)
5.)

SAMPLE CONDITION: (circle 1)

Ambient (Refrigerated) Frozen

Ambient Refrigerated Frozen

Ambient Refrigerated Frozen

Ambient Refrigerated Frozen

Ambient Refrigerated Frozen

NOTES:

- ☒ If MTBE is detected by EPA Method 8020, please confirm detections by EPA Method 8260 with a minimum detection limit of 5 ug/L, and report only confirmed 8260 detections.
- ☒ For MTBE-analyzed samples with non-detectable results (ND) but having elevated detection limits, please confirm by EPA Method #8260.
- ☒ Please use MDL (Minimum Detection Limit) for any diluted samples.

ADDITIONAL COMMENTS

- Please produce and email an EDF of these results to frances@weber-hayes.com